

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
Revitalization of the AM Radio Service)	
First Report And Order, Further Notice of Proposed Rule Making and Notice of Inquiry)	MB Docket No. 13-249

To: The Commission

COMMENTS OF SUNRISE BROADCASTING CORPORATION

Sunrise Broadcasting Corporation (“Sunrise”), by its counsel, pursuant to Section 1.401 of the Commission’s Rules, hereby submits these Comments in the above-captioned AM Revitalization Rule Making Proceeding, wherein the FCC seeks to investigate possible changes to its rules which would allow AM broadcasters to better serve the public. The technical comments have been prepared by Clarence M. Beverage of Communications Technologies, Inc.

Introduction

Sunrise is the licensee of Class D AM Station WGNV operating on 1220 kHz at Newburgh, New York. WGNV has experienced an erosion of listeners over time due to both low signal quality associated with increasing levels of electrical interference and the disparity between the size of its daytime and nighttime coverage areas. Increased competition from unlicensed program services employing Wi-Fi and internet delivered radio, which have the same signal quality and range day and night, makes the future of AM radio questionable despite a heavy focus on program content meeting the needs of the local community. Many of the proposals found in this proceeding show great potential benefit for AM stations as they would provide for stronger day and night signals. Sunrise offers the following comments in support of specific Commission proposals. Paragraph numbers are those found in the First Report and Order, FCC 15-142 (“NPRM”), released October 23, 2015.

Section A. Modify AM Protection Standards

At paragraph 49, the Commission introduces modification of the AM protection standards. At paragraph 56, the Commission proposes the following changes to the protection standards for Class A stations:

“We tentatively conclude, therefore, that (1) all Class A stations should be protected, both day and night, to their 0.1 mV/m groundwave contour, from co-channel stations; (2) all Class A stations should continue to be protected to the 0.5 mV/m groundwave contour, both day and night, from first adjacent channel stations; and (3) the critical hours protection of Class A stations should be eliminated completely.”

Sunrise believes, as stated by many commenters in this proceeding, that the existing level of interference in the AM band makes listening to a 0.1 mV/m signal nearly impossible in many areas and therefore believes that the limit of protected service, both day and night, should be the 0.5 mV/m ground wave contour for co-ch operation and be consistent with the protection levels set for Class B, C and D stations on adjacent channels as addressed herein. Sunrise concurs with the Commission’s recommendation that critical-hours protection for Class A stations should be eliminated completely.

It is Sunrise’s belief that there is a plethora of program choices available on FM radio, satellite radio, over Wi-Fi and internet and cellular radio handsets today. These quality, reliable, program sources are in sharp contrast to the sporadic nature of regularly fading sky wave service provided by Class A stations experienced on the AM band today. It is reasonable to believe that if Class A sky wave service were to stop, the public interest would be better served by the many local stations who could meet the needs of their community who are currently deprived of any nighttime local AM service opportunity because of Class A sky wave protection requirements.

Section A. 2. Change Nighttime RSS Calculation Methodology

At paragraph 62, the Commission proposes modified nighttime protection standards which are much more in keeping with the nighttime allocation rules employed by our neighbors in Canada and Mexico:

“We therefore tentatively conclude that we should roll back the 1991 rule changes as they pertain to calculation of nighttime RSS values of interfering field strengths and nighttime interference free service. We propose to amend Section 78.182(k) of the Rules to return to predicting the nighttime interference-free coverage area using only the interference contributions from co-channel stations and the 50 percent exclusion method.”

Sunrise wholeheartedly supports the removal of adjacent channel protection requirements in the calculation of nighttime interference and protection of station nighttime service based on the 50% RSS. The Commission itself offers a most powerful reason for making this change when it states “... the rules have impeded facility improvements that are more necessary now than 24 years ago, because the noise floor has increased as much as or more than station-to-station interference, and increasing signal strength to a station’s primary service area has become more of a priority than maintenance of rules that offer a small return on interference reduction, compared to the burden they impose on signal improvement.”

Section A. 3. Change Daytime Protection to Class B, C and D Stations

At paragraphs 63 – 65, the Commission proposes to maintain the current 26 dB D/U daytime co-ch protection ratio and return to the 0 dB D/U 1st and 2nd adjacent channel protection ratio in place prior to 1991 and remove 3rd adjacent channel protection requirements. The daytime contour to be protected would be the 2 mV/m contour for co and first adjacent channel stations and the 25 mV/m contour for 2nd adjacent channel stations.

Sunrise heartily supports these changes but does believe that Class A stations should be protected as is proposed for Class B, C and D stations on 1st adjacent and 2nd adjacent channels but protected to the 0.5 mV/m contour by other co-channel stations.

Summary of Daytime Proposed Allocation Changes to be found in Section 73.37(a)

Revise paragraph (a) of Section 73.37 to read as follows:

§ 73.37 Applications for broadcast facilities, showing required.

(a) * * *

Frequency Separation (kHz)	Contour of proposed station (classes B, C and D) (mV/m)	Contour of any other station (mV/m)
0	0.025 0.100 2.0	0.500 (Class A) 2.0 (Other classes) 0.100 (Other classes)
10	2.0 2.0	2.0 (Class A) 2.0 (Other classes)
20	25.0	25.0 (All classes)

Daytime and Night Proposed Allocation Changes as Found in Section 73.182(o)

The above changes can be summarized by reference to Section 73.182(o) of the Rules, which should look like this:

Class of station	Class of channel used	Signal strength contour of area protected from objectionable interference (µV/m)		Permissible interfering signal (µV/m)	
		Day - GW	Night - GW	Day-GW	Night
A	Clear	SC 500 AC 2000	SC 500 AC 2000	SC 25 AC 2000	SC 25 SW AC 2000 GW
B	Regional	2000	2500 or NIF if >	SC 100 AC 2000	20:1 10%SW Not presc.
C	Local	2000	Not presc.	SC 100	Not presc.
D	Regional	2000	Not presc.	SC 100 AC 2000	Not presc. Not presc.

Section B. Revise Rule on Siting of FM Cross-Service Fill-In Translators

Sunrise fully supports the Commission's position as found in paragraph 68 with respect to keeping the fill-in cross-service translator service area within the core market area of the AM station. Extending the translator 60 dBu contour radius to 64 kilometers is a step in the right direction, but it does not fully account for the high conductivity found predominantly in the middle of the country and the needs of those stations.

Here are some examples. The highest conductivity in the U.S. is 30 Millisiemens. A 50 kW station with a 5/8 wave tower on 540 kHz on that conductivity would have a 2 mV/m contour that goes out 384 kilometers. That conductivity extends from Dallas up into central Nebraska. At 1000 kHz the distance drops to 225 kilometers and at 1600 kHz the distance to the contour drops to 138 kilometers.

A 15 conductivity stretches through much of the central U.S. from the Mexican border to the Canadian border. Picking a more modest 5 kW power level and standard 90 degree quarter wave tower, distances to the contour on a 15 conductivity are:

540 kHz	146 kM
1000 kHz	84
1600 kHz	52

An FM translator's 60 dBu coverage contour, even under the best circumstances, assuming a maximum powered translator (250 watts) at 2,000 feet HAAT, would extend out 33 kilometers. However, a minimum "listenable" signal (34 dbu) could extend out 92 kilometers from the translator transmitter site for the same facility. Thus, even if the proposed rule modification were expanded to a 40 mile radius as suggested changing the rule to recognize the practical extent of service that an FM translator can provide would provide greater flexibility to AM operators desiring to locate their FM translators in locations where they determine would best serve their "core" audience while still being within the primary AM's 2 mV/m contour. Although unlikely, given the maximum range of an FM translator signal as described above, that the translator coverage would exceed that of the primary AM's 2 mV/m contour, it is believed that allowing the translator 60 dBu to extend out a maximum of 60 miles, or 96 kilometers from the AM transmitter site, but remain within the 2 mV/m contour, is an optimum change to Section 74.1201(g).

Hence, Sunrise proposes the following modified language for Section 74.1201(g):

- (g) * * * The coverage contour of an FM translator rebroadcasting an AM radio broadcast station as its primary station must be contained within the greater of either the 2 mV/m daytime contour of the AM station or a 25-mile (40 km) radius centered at the AM transmitter site, but the translator's 1 mV/m coverage contour may not extend beyond a 60-mile (96 km) radius centered at the AM transmitter site. The protected contour for an FM translator station is its predicted 1 mV/m contour.

Section C. Modify Partial Proof of Performance Rules

At paragraph 70, the Commission proposes to modify Section 73.154(a) to reduce the number of required radials to be measured in a partial proof of performance, believing that this change will not result in AM directional antenna systems being out of adjustment as a result of this change. Sunrise agrees with the Commission's conclusion and thus agrees with the change.

Section D. Modify Rules for Method of Moments Proofs

At paragraph 72, the Commission lists seven changes to the MoM Proof Rules which are based on years of processing MoM license applications and commenter's input. At paragraph 73, the Commission proposes to implement the seven procedural and rule changes with the exception of the elimination of reference field strength measurements. Sunrise agrees with the Commission's conclusion and thus agrees with the proposed changes. With regard to Section 73.151(c)(3), it is agreed that maintaining the requirement for reference field strength measurements, when the initial license application is filed, should be maintained in the rules. Because physical environments do change over time it is suggested that the recertification portion of the rule be changed to require recertification measurements once every five years.

With regard to modeling of a skirt-fed tower, Sunrise is strongly against requiring a specific MoM software. This is based on historical data having been submitted to the Commission. For example, in the license filing of Station WEZR(AM), Lewiston, Maine, BL-20130208ABU, both Mininec and NEC-4 analysis of the skirt feed of the tower was submitted along with a comparison to sinusoidal calculations. The modeling results showed that the NEC-4 model showed good agreement with the measured impedance and the current distribution. As long as the model data is calibrated against measured impedance and the current distribution is shown to be reasonable, there should be no reason to question the software used. Also, limiting the software used would prevent new software implementations with potentially greater accuracy from being employed which would be a great disservice to both the Commission and the industry.

Section V. B. Relaxed Main Studio Requirements

At paragraph 87, the Commission cites the historical need for a main studio as the vehicle by which a station serves the needs and interests of those residing in the station's community of license. Arguably a station which serves the needs of its community and surrounding area has loyal listenership and enjoys the support of the community. If serving the community is the goal, then perhaps the focus question ought to be how does a station best serve its community and listeners in the 21st century? Once that question is fully answered, perhaps the question will not be "what are the main studio requirements" but instead "what is required to successfully serve the community of license and local service area?"

What is the Solution to the Problem of Uniform Day and Night Service Area?

The daytime allocation changes proposed herein should do a great deal to help stations with complex directional patterns to reduce the depth of nulls and possibly reduce the number of towers in a directional array resulting in improved service. The nighttime allocation changes proposed - most importantly limiting RSS night calculations to 50%, removing adjacent channel stations from the RSS calculation, and deleting protection to Class A station 0.5 mV/m sky wave contours while fully protecting the nighttime Class A 0.5 mV/m daytime groundwave contour, should allow Class D and B stations to gain night service where none now exists or to improve existing night service. These benefits may be significant.

However, the Commission has not yet addressed pre sunrise and post sunset operation in this proceeding for Class D stations. A sure road to increased AM viability, and ability to serve the public, would be to allow all stations to be on the air during morning and afternoon drive times.

These changes in AM stations, along with the greater availability of FM translators, will certainly help AM stations to not only survive but better serve their markets. However, it is Sunrise's view that AM stations will never compete fully with FM stations, or other services which offer program availability 24/7, until they migrate to a new frequency range in the VHF or UHF band where they can provide full stereo operation 24 hours per day. That need should not be forgotten.

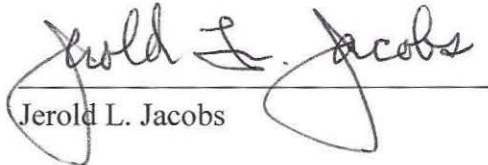
Conclusion

Sunrise believes that there is a bright future for AM Radio, and that future can be seen by implementing full digital transmissions with broader bandwidth. We thank the Commission for continuing a proceeding that could help AM broadcasters to more effectively serve the public. We note that the Sunrise vision is a medium term vision, but it would lead to a more healthy and vibrant radio service which, as helpful as some of the technical proposals in the NPRM may be in the short term, will not achieve the same, truly vibrant, change in the AM service as described as the ultimate goal of the NPRM.

Respectfully submitted,

SUNRISE BROADCASTING CORPORATION

By:


Jerold L. Jacobs

Law Offices of Jerold L. Jacobs
1629 K Street, N.W. Suite 300
Washington, D.C. 20006
Tel. 202-508-3383

Its Counsel

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